GOVERNMENT OF INDIA
NON-CONVENTIONAL ENERGY SOURCES
LOK SABHA

UNSTARRED QUESTION NO:3370
ANSWERED ON:16.03.2000
REVIEW OF SOLAR ENERGY PROGRAMME
SHIVAJI VITHALRAO KAMBLE

Will the Minister of NON-CONVENTIONAL ENERGY SOURCES be pleased to state:

(a) the physical and financial target fixed by the Government for solar energy programme during the last three years;

(b) the achievements made so far;

(c) whether the Government have recently reviewed solar energy programme;

(d) if so, the details thereof;

(e) the details of fresh strategies evolved for harnessing abundant solar energy and developing upgrading appropriate technologies;

(f) the details of investments made and proposed to be made in R&D in solar segment;(g) whether any joint ventures/ international cooperation finalized/ under consideration for promotion harnessing of solar energy for projects in various states and particularly in Maharashtra; and (h) if so, the details thereof?

Answer

MINISTER OF STATE FOR NON-CONVENTIONAL ENERGY SOURCES (INDEPENDENT CHARGE) (SHRI M. KANNAPPAN)

(a) & (b): The physical and financial targets fixed by the Governmentfor various solar energy programmes during the last three years and the achievements made so far are given in Tables I & II.

(c), (d) & (e): The progress in the implementation of various solar energy programmes is reviewed every year and also while formulating the Five Year Plans. Based on the review and the resources available, guidelines for implementation of the programmes are formulated and circulated to all implementing agencies. Among the major changes made and new strategies evolved during the last few years for promoting the use of solar energy in the country are:

(i) The subsidy on solar water heaters, solar cookers and other solar thermal devices was discontinued. Soft loan schemes have been introduced through the Indian Renewable Energy Development Agency and six banks to finance these devices.

(ii) The solar photovoltaic programme has been expanded and procedures for implementation streamlined. A new scheme relating to grid connected power plants has been introduced.

(iii) Quality improvement and standardisation have been given emphasis. Test facilities have been established for both solar thermal and photovoltaic products.

(iv) In order to promote the use of solar water heating systems in urban areas, a model amendment to building bye-laws has been prepared and circulated to all State Governments; the model regulation seeks to make the installation of such systems mandatory in several types of the buildings.

(v) R&D and demonstration activities have been strengthened. Several new designs of solar cookers, cooking systems and photovoltaic products have been developed and are in different stages of demonstration and evaluation. Among the recent achievements is the installation of the world`s largest solar cooking system at Taleti near Mt. Abu in Rajasthan.

(vi) A new scheme for providing soft loans to manufacturing projects aimed at reducing the cost of solar photovoltaic products has been started.

(f): An amount of Rs. 6.81 crores has been spent towards R&D related to solar energy programmes during the first three years ofthe Ninth plan till 29th February 2000. The yearwise details of the expenditure made so far are as follows: Expenditure(Rs. in lakhs)

	97-98	98-99	99-2000
i)	Solar Thermal	13.40	29.00	27.71
ii)	Solar Photovoltaics	61.50	352.00	198.68

It is proposed to invest Rs. 3.00 crores in solar photovoltaic and Rs. 50 lakhs in solar thermal R & D during 2000-2001.

(g) & (h): Several projects and ventures involving international cooperation or funding have been taken up by different organizations in various States. Among the projects which have started recently or are under implementation are Lines of Credit from the World Bank,

Asian Development Bank and KFW of Germany for supporting solar projects in India, an Indo-US project for installation of solar photovoltaic systems in a few villages in West Bengal, private sector projects financed under the Photovoltaic Market Transformation Initiative funded by the Global Environment Fund and solar manufacturing and marketing ventures in Haryana, Karnataka and Andhra Pradesh. In Maharashtra a photovoltaic module manufacturing unit has been established at Nasik based on technology from USA. Government have recently approved a project for the establishment of a 140 MW Integrated Solar Combined Cycle power plant at Mathania near Jodhpur in Rajasthan with part finance from the Global Environment Facility and KFW.

Table-I Table-I referred to in reply to Parts(a)&(b) of Lok Sabha Unstarred Question No. 3370 for 16.3.2000 regarding Review of Solar Energy Programme. PHYSICAL TARGETS FIXED AND ACHIEVEMENTS MADE DURING THE LAST THREE YEARS UNDER SOLAR ENERGY PROGRAMMES

S.No.. System	1997-98		1998-99		1999-2000	
	Target	Achievement	Target	Achievement	Target	Achievement
1.Solar Water Heater (sq.m)	35,000	40,000	40 ,000	40,000	40 ,000	30,000
2. Solar Cookers (No.)	35,000	24,000	25,000	20,000	25,000	5,000
3. Solar Lantern(No.)	60,000	46,808	60,000	43,573	60,000	49,376
4. Home Lighting systems(No.)	25,000	17,614	25,000	21,315	30,000	24,521
5. Power Plants & other systems (kW)	100	123	100	206	425	340
6. SPV Water Pumps (No.)	1000	528	Nil	377	500	308
7 Solar Power Plants (Grid connected in kW)	300	300	200	200	200	100

till 29.2.2000 TableII Table-II referred to in reply to Parts(a)&(b) of Lok Sabha Unstarred Question No. 3370 for 16.3.2000 regarding Review of Solar Energy Programme.
FINANCIAL ALLOCATIONS (REVISED ESTIMATES) AND ACHIEVEMENTS MADE DURING LAST THREE YEARS UNDER SOLAR ENERGY PROGRAMMES

Rs. in crore

S.No. Programme	1997-98		1998-99		1999-2000	
	Allocation	Achievement	Allocation	Achievement	Allocation	Achievement
1 Solar Thermal	3.50	3.31	2.50	1.38	2.50	2.28
2. Solar Photovoltaic	5.77	15.28	33.00	37.00	41.00	31.84
3. SPV Water Pumping	0.40	0.05	7.50	0.05	7.00	6.62
4. Solar Power (Grid connected) till 29.02.2000	1.90	1.90	2.10	2.65	5.25	3.26